

## Zinc Cupronickel

# Ns10Zn42 (RBCuZn-D)

### Material Designation \*

|     |                      |
|-----|----------------------|
| AWS | RBCuZn-D             |
| EN  | CuZn40Ni10 (Cu 7730) |
| JIS | /                    |
| GB  | SCu7730              |

### Chemical Composition

|    |           |   |
|----|-----------|---|
| Cu | 46.0-50.0 | % |
| Zn | Balance   | % |
| Ni | 9.0-11.0  | % |
| Si | 0.04-0.25 | % |



### Characteristics

It is copper welding wire containing silicon. The addition of silicon can effectively prevent volatilization of zinc during welding. And it has higher strength than general brass welding wire and better corrosion resistance in sea water and caustic media.

### Typical Applications

It is suitable for welding steel, nickel, nickel-based alloys and hard alloys. It is also used for machinery manufacturing, automation industry and steel furniture.

### Physical Properties

|   |      |                     |
|---|------|---------------------|
| Density <sup>①</sup>                          | 8.7  | g/cm <sup>3</sup>   |
| Melting point                                 | 890  | °C                  |
| Thermal conductivity <sup>①</sup>             | 31   | W/m·K               |
| Coefficient of thermal expansion <sup>②</sup> | 16.7 | 10 <sup>-6</sup> /K |
| Electrical conductivity <sup>①</sup>          | 6    | %IACS               |

Note①: Temperature for testing is 20°C.

Note②: Temperature range for testing is 20-300°C.

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## Delivery Form

|              | Packing                        | Size(ODxDxHeight)                     | Weight/Length | Diameter                 |
|--------------|--------------------------------|---------------------------------------|---------------|--------------------------|
|              |                                |                                       | kg/mm         | mm                       |
| Spool        | D200 (Plastic spool)           | $\Phi 200 \times \Phi 52 \times 55$   | 5.0           | $0.8 \leq \Phi \leq 1.6$ |
|              | D300 (Plastic spool)           | $\Phi 300 \times \Phi 52 \times 100$  | 12.5          | $0.8 \leq \Phi \leq 1.6$ |
|              | BS300 (Galvanized steel spool) | $\Phi 300 \times \Phi 52 \times 100$  | 12.5          | $0.8 \leq \Phi \leq 1.6$ |
| Barrel       | 100kg (Barrel carton)          | $\Phi 500 \times \Phi 305 \times 500$ | 100           | $0.8 \leq \Phi \leq 1.2$ |
|              | 200kg (Barrel carton)          | $\Phi 500 \times \Phi 300 \times 750$ | 200           | $0.8 \leq \Phi \leq 1.2$ |
|              | 200kg (Barrel carton)          | $\Phi 660 \times \Phi 440 \times 700$ | 200           | $\Phi = 1.6$             |
| Straight bar | Crate                          | --                                    | 250-3000mm    | $1.6 \leq \Phi \leq 7.0$ |
| Coil wire    | Kraft/crate                    | --                                    | 10-200        | $0.8 \leq \Phi \leq 7.0$ |

\*Composition           AWS  
Other Physical Properties   AWS

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